

REMARKS

Formal drawings (five sheets) now required to be presented, including the items objected to by the examiner, are submitted herewith. The well wall 3 and the tape support member 3a has been added to the drawing. The attorney spend frustrating hours with Microsoft WORD trying to comply with the new amendment procedures in the specification change section. The PTO's instructions were very difficult to implement and I respectfully submit that PTO procedural clarification is in order. Please advise the Group Director of my opinion. I was unable to preserve the strikethroughs and underlines without setting up separate files and I could not copy the paragraphs with strikethroughs and underlines into the final RESPONSE and thus submit them separately which should suffice as they must begin on separate pages in any case. I was unable to get rid of the vertical lines in the margins. Color should be acceptable as the Abobe PTO fillable forms produce the printout in blue coloring. The most of the examiner's objections to typographical errors in the specification have been corrected herein. "Hydrostatic circuit" has been changed to "hydrostatic sensing circuit" (7) as it is usually described in the specification. The examiner's comment re page 5, lines 27-29 is not understood; clarification is requested.

Claims 1-26 were rejected as being unpatentable under 35 U.S.C. 103 over Ehrenfried et al., 4,967,594 (the primary reference) in view of a publication of "Solinst." This rejection is respectfully traversed. These references are essentially the same as the Ehrenfried patent discussed by applicant on page 3 of the specification and the prior art Solinst tape wound on a reel discussed in detail on pages 1 and 2 of applicant's specification. The problems with

the “Solinst” tape wound on a reel approach employing an IR beam were discussed in substantial detail on page 2 and thus are not repeated in detail here. As explained in the specification, applicant’s claimed invention has eliminated these problems, including tape reading errors, tedious winding and unwinding of tape into and out of each well needed to read liquid levels in contrast with the invention, and cross-contamination between wells as the tape is transported from one well to another.

This rejection is a classic example of reconstructing the invention through the improper hindsight use of applicant’s teachings. Going one step further it difficult to see just how these two references can be combined at all. The tape reel method of Solinst functions something like a huge flexible dipstick used to measure liquid layers (think auto oil dipstick) and how such a technique would be combined with stationary elongated sensors having strings of resistive networks and resistance measuring means is difficult to perceive.

The Manual of Patent Examining Procedure (MPEP), sec. 2143, page 2100-122 of the August 2001 Edition regarding a 35 U.S.C. 103 rejection states that: “To establish a prima facie case of obviousness, three basic criteria must be met. First [1], there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the references or to combine reference teachings. Second [2], there must be a reasonable expectation of success. Finally [3], the prior art reference (or references when combined) must teach or suggest all the claim limitations.”

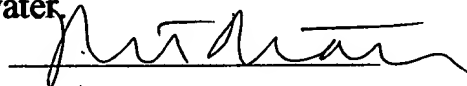
Regarding [1] and [3] where is the suggestion to provide claim limitations including conductive liquid sensing circuit (a-1) of the independent claim 1 for sensing conductive liquids only having a first resistive network in combination with a hydrostatic sensing circuit having a second resistive network responding to pressure of conductive and non-conductive liquids. Likewise with respect to the remaining independent

claims 34 and 43. Furthermore, where is the suggestion of the additional third resistive network for producing a resistance proportional to the length of said first elongated sensor of independent claims 34 and 43. The sixteen page office action purports to analyze the dependent claims one by one but they should all be allowed owing to the remarks in this paragraph alone.

Furthermore, all remaining dependent claims more particularly point out and distinctly claim the nature of these claimed sensors in the independent claims and should be a fortiori allowable. The limitation of means for subtracting measured resistances of the first and second network is lacking (claim 5-7, 35), the limitation of means for measuring the resistance of the first network from the bottom of the well is lacking (claims 2, 36, 37); the limitation of the subtraction of the measured resistance of the first network from the third network to indicate the height of the water column is lacking (claims 38-41).

Claims 12-15 specify that the two elongated resistive sensors (a-1; a-2) of claim 1 are retained in place within the well between well inspections for eliminating the tedious Solinst process of lowering the sensors into the well during liquid layer measurements which tedious process is also subject to reading errors as discussed in detail in applicant's specification on page 2. The resistances of the networks can thus be quickly and easily measured from the top of the well manually by an ohm-meter and the calculations done with a pencil or with a calculator or with a microprocessor in a manner well known in the art. Regarding this feature, see also dependent claim 42 and claim 43, paragraph (g).

Regarding the third MPEP 2143 criteria [3] how can combining the two references lead to a reasonable expectation of applicant's success in eliminating the aforesaid problems. In fact, how can these references be combined at all? The primary reference yields one reading indicating the height of a liquid in a tank and there are no readings of two or three resistive networks in the art to accomplish differentiating both light and heavy products that may be present in addition to water.



Robert L. Nathans

Registration # 19,558.

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